

WHAT IS CLAIMED IS:

1. A biochemical reaction cartridge, comprising:
an injection port for injecting a specimen
therefrom,
5 a first chamber for containing the specimen
therein,
a second chamber for containing therein a
reagent which contributes to a biochemical reaction,
a passage for passing therethrough the
10 specimen and/or the reagent and/or a reaction liquid,
and
a plurality of nozzle ports for receiving a
plurality of nozzles for applying or reducing
pressure,
15 wherein said plurality of nozzle ports
communicate with said first or second chamber, and
fluid is present between said plurality of nozzle
ports and said first or second chamber and is
pressurized or depressurized by said plurality of
20 nozzles to move the specimen and/or the reagent and/or
the reaction liquid, thereby to effect a sequence of a
biochemical reaction within the cartridge.
2. A cartridge according to Claim 1, wherein
25 said plurality of nozzle ports are divided into two
portions, which are disposed on two surfaces of the
cartridge.

3. A cartridge according to Claim 1 or 2,
wherein said plurality of nozzle ports are disposed
linearly.

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4. A cartridge according to Claim 2, wherein the
cartridge is a substantially rectangular
parallelepiped, and the two surfaces are lateral
surfaces, opposite from each other, of the
10 parallelepiped.

5. A cartridge according to Claim 1, wherein
said particles of a magnetic material to which a
target material comprising DNA, RNA or protein is
15 adsorbed, are used as a species of the reagent, and
are trapped during movement thereof by exerting a
magnetic force of a magnet disposed close to said
passage, after an adsorption reaction is completed,
thereby to purify the target material.

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6. A cartridge according to Claim 1, wherein the
cartridge further comprises a chamber containing a
washing liquid and a chamber containing waste liquid
after washing.

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7. A biochemical treatment apparatus,
comprising:

a cartridge mounting portion for mounting a cartridge having a plurality of chambers containing a solution for biochemically treating a specimen,

a plurality of nozzle portions each connected
5 to an associated passage communicating with an associated chamber of the chambers of the cartridge, and

control means for controlling a fluid pressure in the cartridge through said nozzle
10 portions,

wherein said control means controls the fluid pressure so that the solution in the cartridge is moved only in the cartridge.

15 8. An apparatus according to Claim 7, wherein a plurality of cartridges are mountable to the apparatus.

20 9. An apparatus according to Claim 7, wherein said plurality of nozzle portions are separately disposed at two surfaces of the cartridge.

10. An apparatus according to Claim 7, wherein said plurality of nozzle portions are arranged
25 linearly.

11. A biochemical treatment process for effecting

biochemical treatment in a cartridge having a plurality of chambers containing a solution for biochemically treating a specimen, said process comprising:

5 a step of connecting each of nozzles to an associated port of passage communicating with an associated chamber of the cartridge, and

 a step of injecting fluid into the cartridge to move the liquid in the cartridge.

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12. A process according to Claim 11, wherein said injection step comprises a step of injecting a hymolytic agent.

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13. A process according to Claim 11, wherein said injection step comprises a step of injecting particles of a magnetic material to which a target material comprising DNA, RNA or protein is adsorbed.

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14. A process according to Claim 13, wherein said process further comprises, after the step of injecting particles of magnetic material, a step of trapping the particles of magnetic material during movement thereof by exerting a magnetic force of a magnet disposed

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close to the passage to purify the target material.

15. A process according to Claim 14, wherein said

process further comprises, after the trapping step, a step of cleaning the target material.

5 16. A biochemical reaction cartridge, comprising:
 a storage chamber for accumulating a liquid,
 a first chamber,
 a first passage for connecting said storage
chamber to said first chamber to move the liquid in
said storage chamber to said first chamber,
10 a second chamber, and
 a second passage for connecting said first
chamber to said second chamber to move the liquid in
said first chamber to said second chamber,
 wherein a bottom position of a first
15 connecting portion for connecting said first chamber
to said first passage is higher than a bottom position
of a second connecting portion for connecting said
first chamber to said second passage.

20 17. A cartridge according to Claim 16, wherein
the liquid is caused to flow to said first chamber so
that said first chamber has a maximum liquid level
lower than the bottom position of the first connecting
position.

25 18. A cartridge according to Claim 16 or 17,
wherein movement of the liquid is controlled by

externally applying or reducing pressure.

19. A cartridge according to Claim 18, wherein
said cartridge comprises a pressure reducing portion
5 for externally reducing pressure, said pressure
reducing portion being provided with a chamber for
preventing outflow of the liquid.

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